

WHAT IS CLAIMED IS:

1. A latching system for a convertible top of a motor vehicle, the latching system comprising:

5 a receiver disposed proximate a windshield header, the receiver having a keeper;

a body molding attached to the convertible top and disposed proximate the windshield header when the convertible top is in an extended position, the body molding including a handle cavity;

10 a latch pin guide portion disposed proximate the body molding, the latch pin guide portion having a passage;

a latch pin moveably disposed in the passage, the latch pin having a first end adapted to engage the keeper and a second end disposed opposite the first end;

15 a connecting rod pivotally coupled to the second end of the latch pin at an outboard end and pivotally coupled to a crank at an inboard end;

a rotatable pin attached to the crank; and

20 a handle pivotally connected to the rotatable pin, the handle being adapted to pivot between a stowed position in which the handle is disposed in the handle cavity and a grasping position in which the handle is pivoted away from the handle cavity to permit the handle to rotate the rotatable pin;

wherein the latching system is actuated between a latched position in which the latch pin engages the keeper and an unlatched position in which the latch pin is spaced apart from the keeper when the rotatable pin is rotated with the handle.

25 2. The latching system of claim 1 wherein the keeper further comprises a tapered surface and the first end of the latch pin further comprises a ramp surface adapted to engage the tapered surface to align the latch pin with the keeper when the latch pin is actuated toward the latched position.

30 3. The latching system of claim 1 wherein the handle further comprises a recess disposed near the rotatable pin for applying pressure to rotate the handle about the rotatable pin.

4. The latching system of claim 1 further comprising a bracket for securing the rotatable pin to the body molding.

5. The latching system of claim 4 wherein the bracket further comprises a hole for receiving the rotatable pin.

5 6. The latching system of claim 4 wherein the bracket is attached to the body molding with a fastener.

7. The latching system of claim 4 wherein the bracket is integrally formed with the body molding.

8. The latching system of claim 1 wherein the handle cavity is
10 integrally formed with the body molding.

9. The latching system of claim 1 wherein the crank is attached to an end of the rotatable pin with a fastener.

10. The latching system of claim 1 further comprising a sensor adapted to detect when the latch pin engages the keeper.

11. The latching system of claim 1 wherein the receiver further
15 comprises a channel to facilitate mounting to the windshield header.

12. A latching system for a convertible top of a motor vehicle, the latching system comprising:

a receiver disposed proximate a windshield header, the receiver
20 having a keeper that includes a tapered surface;

a body molding disposed proximate the windshield header when the convertible top is in an extended position, the body molding including an integrally formed handle cavity;

a latch pin guide portion disposed proximate the body molding, the
25 latch pin guide portion having a passage;

a latch pin moveably disposed in the passage, the latch pin including a first end having a ramp surface and a second end disposed opposite the first end, the first and second ends being disposed outside the passage;

5 a handle assembly including a handle that is adapted to pivot between a stowed position in which the handle is disposed in the handle cavity and a grasping position in which the handle is pivoted away from the handle cavity; and

a connecting rod linking the latch pin and the handle assembly;

10 wherein the tapered surface engages the ramp surface to align the latch pin with the keeper when the latching system is actuated toward a latched position and the latch pin is spaced apart from the keeper in an unlatched position.

13. The latching system of claim 12 wherein the handle assembly further comprises a rotatable pin having a lower end disposed adjacent to a handle flange and pivotally coupled to the handle and an upper end coupled to a crank that is pivotally connected to the connecting rod.

15 14. The latching system of claim 13 further comprising a bracket having a hole for receiving the rotatable pin and securing the rotatable pin to the body molding.

15. The latching system of claim 14 wherein the upper and lower ends of the rotatable pin extend from the hole.

20 16. The latching system of claim 14 wherein the bracket is integrally formed with the body molding.

17. The latching system of claim 12 wherein the tapered and ramp surfaces are disposed substantially parallel to each other.

25 18. A latching system for a convertible top of a motor vehicle, the latching system comprising:

a receiver disposed proximate the motor vehicle, the receiver having a keeper that includes a tapered surface;

a body molding including a bracket and a handle cavity;
a latch pin guide portion disposed proximate the body molding and
having a passage;

5 a latch pin moveably disposed in the passage, the latch pin including
a first end having a ramp surface configured to engage the tapered surface and
second end disposed opposite the first end, the first and second ends being disposed
outside the passage;

a handle assembly secured to the body molding with the bracket, the
handle assembly including a handle that is adapted to pivot about a first axis between
10 a stowed position and a grasping position and rotate about a second axis disposed
generally perpendicular to the first axis; and

a connecting rod linking the latch pin and the handle assembly;

wherein the latch pin moves linearly between a latched position in
which the latch pin engages the keeper and an unlatched position in which the latch
15 pin is spaced apart from the keeper when the handle is disposed in the grasping
position and the handle is rotated about the second axis.

19. The latching system of claim 18 wherein the bracket and
handle cavity are integral with the body molding.

20. The latching system of claim 18 wherein the body molding
20 further comprises a hand grip filler portion received within the handle when the
handle is in the stowed position and wherein the bracket is disposed adjacent to the
hand grip filler portion.